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Set      Items   Description
S1          44   AU=(MATTHIES D? OR MATTHIES, D?)
S2      652781   FLAT? ? OR FLATTEN? ? OR FLATTENING? ?
S3     1118984   SHEET? ?
S4           9   S1 AND S2 AND S3
S5           9   IDPAT (sorted in duplicate/non-duplicate order)
S6           9   IDPAT (primary/non-duplicate records only)
? show files
File 347:JAPIO Oct 1976-2003/Mar(Updated 030703)
         (c) 2003 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2003/Jul W01
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030710,UT=20030703
         (c) 2003 WIPO/Univentio
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200345
         (c) 2003  Thomson Derwent
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6/9/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

015355789 **Image available**
WPI Acc No: 2003-416727/200339
XRAM Acc No: C03-110287
XRPX Acc No: N03-332187
Manufacture of display for electronic devices, involves temporarily flattening a sheet , processing the sheet , and securing the sheet to second sheet while continuing to hold the sheet in flattened configuration
Patent Assignee: MATTHIES D L (MATT-I)
Inventor: **MATTHIES D L**
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20030011108	A1	20030116	US 2001904269	A	20010712	200339	B

Priority Applications (No Type Date): US 2001904269 A 20010712
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030011108	A1		7	B29C-043/02	

Abstract (Basic): US 20030011108 A1
NOVELTY - A display is made by temporarily **flattening** a **sheet** ; processing the **sheet** ; and securing the **sheet** to a second **sheet** while continuing to hold the **sheet** in a flattened configuration.
USE - For manufacturing a display for electronic devices.
ADVANTAGE - The method ensures good surface-to-surface contact for electrical connections. By processing the **sheet** prone to warpage in a flattened configuration, the occurrence of stress-induced cracking when the **sheet** is applied to a rigid planar surface is reduced. Further, a distorted **sheet** may be processed economically while still resulting in a final product, which is regular, **flat** and planar.
DESCRIPTION OF DRAWING(S) - The figure is a cross-sectional view of a pair of chucks in opposition.
Vacuum chuck (18a, 18b)
pp; 7 DwgNo 2/8
Technology Focus:
TECHNOLOGY FOCUS - ELECTRONICS - Preferred Method: The temporarily **flattening** step includes placing the **sheet** in a vacuum chuck (18a, 18b), and applying a vacuum to **flatten** the **sheet** . The processing step includes applying row and column electrodes to the **sheet** ; and applying a light emitting material to the **sheet** . The application of the light emitting material includes applying an organic light emitting material between the row and column electrodes.
The method further includes processing the second **sheet** in a flattened configuration and in the chuck; processing both the first and second **sheets** in the chuck; combining the **sheets** using the chucks; securing the **sheets** to an integrator plate; surface mounting the first and second **sheets** in the chucks. The **sheet** is secured to a planar surface or a glass panel.
Preferred Component: The **sheet** can be a warped **sheet** or a ceramic **sheet** .
Title Terms: MANUFACTURE; DISPLAY; ELECTRONIC; DEVICE; TEMPORARY; **FLATTEN** ; **SHEET** ; PROCESS; **SHEET** ; SECURE; **SHEET** ; SECOND; **SHEET** ; CONTINUE; HOLD; **SHEET** ; **FLATTEN** ; CONFIGURATION
Derwent Class: L03; U12; U14
International Patent Class (Main): B29C-043/02

International Patent Class (Additional): C03B-023/02
File Segment: CPI; EPI
Manual Codes (CPI/A-N): L03-G05
Manual Codes (EPI/S-X): U12-A01A1X; U12-A01A2; U12-A01A3; U12-A01A6;
U14-J01; U14-J02D2
?

6/AU,AB,AD,PN,PD,AN/2 (Item 2 from file: 349)

Inventor(s):
MATTHIES Dennis Lee , 387 Nassau Street, Princeton, NJ 08540, US
Patent and Priority Information (Country, Number, Date):
Patent: WO 200247310 A2-A3 20020613 (WO 0247310)
Application: WO 2001US46455 20011109 (PCT/WO US0146455)

English Abstract
A tiled display structure (100) is fabricated on a single substrate that also serves as a circuit board (130) containing electronic components. Electrodes are formed on the substrate and the remainder of the display section (310) is formed on the electrodes (322, 328). The electronic components are mounted on the substrate using exceptionally long leads (132) to assist in the thermal management of tiles.

French Abstract
La presente invention concerne un structure d'affichage a paves realisee sur un substrat unique servant egalement de carte de circuit imprime comportant des composants electroniques. Les electrodes sont formees sur le substrat et le reste de la section d'affichage est constitue sur les electrodes. Les elements de pixel utilisent un materiel d'affichage a motifs, et occupent seulement une portion de la structure de pixels. Les composants electroniques sont montes sur le substrat au moyen de fils particulierement longs contribuant ainsi au controle thermique des paves. Dans une variante, chaque pave inclut une structure a ailettes sur la surface de la carte de circuit imprime sur laquelle les composants electroniques sont montes et ne sont pas en contact avec le substrat. Dans une autre variante, chaque pave comprend une carte de circuit imprime flexible montee sur le substrat, une portion de laquelle est repliee en eloignement du substrat. Les composants electroniques sont relies a cette portion de cartes de circuits imprimes flexibles de sorte que les composants ne soient pas en contact avec le substrat contribuant ainsi le controle thermique.

6/AU,AB,AD,PN,PD,AN/5 (Item 5 from file: 349)

Patent Applicant/Inventor:
MATTHIES Dennis Lee , 387 Nassau Street, Princeton, NJ 08540, US, US (Residence), US (Nationality), (Designated only for: US)
STEWART Wilber Clarence, 11 Shagbark Lane, Hightstown, NJ 08520, US, US (Residence), US (Nationality), (Designated only for: US)
ALPHONSE Gerard Argant, 5 Skyfield Drive, Princeton, NJ 08540, US, US (Residence), US (Nationality), (Designated only for: US
Patent and Priority Information (Country, Number, Date):
Patent: WO 200102882 A1 20010111 (WO 0102882)
Application: WO 2000US16927 20000620 (PCT/WO US0016927)

English Abstract
A lenticular screen component of a rear projection display screen has lenticular elements formed on a viewer surface. Identical lenticular elements cover the entire lenticular screen component and are repeated horizontally at a constant displacement. A given lenticular element includes a pair of reflective side portions and a refractive tip portion interposed between the side portions. One of the pair of side portions forms a sloped region at a joint between the one side portion and a side portion of an adjacent lenticular element. The sloped region is at an angle in a range between 5 and 15 degrees with respect to the first axis.

The one side portion is covered with a reflective coating in at least a region of the one side portion that includes the joint. The pair of reflective side portions reflects light rays incoming from a projector towards the refractive tip portion for refracting the reflected light rays via a surface of the refractive tip portion facing a viewer. Each refracted light ray is refracted by a convex surface of the refractive tip portion.

French Abstract

Cette invention se rapporte a un composant lenticulaire d'un ecran d'affichage a retroprojection, qui comporte des elements lenticulaires formes sur une surface de visualisation. Des elements lenticulaires identiques couvrent la totalite du composant lenticulaire et se repetent horizontalement a intervalles constants. Un element lenticulaire donne comprend une paire de parties laterales reflechissantes et une partie de pointe refractive placee entre les parties laterales. L'une des deux parties laterales forme une zone en pente au niveau d'une jonction entre cette partie laterale et une partie laterale d'un element lenticulaire adjacent. La zone en pente forme un angle compris entre 5 et 15 degres par rapport au premier axe. L'une des parties laterales est couverte d'un revetement reflechissant dans au moins l'une de ses zones contenant la jonction. La paire des parties laterales reflechissantes reflechit les rayons lumineux provenant d'un projecteur en direction de la partie de pointe refractive, en vue de produire la refraction des rayons lumineux reflechis via une surface de la partie de pointe refractive faisant face a l'observateur. Chaque rayon lumineux refracte est refracte par une surface convexe de la partie de pointe refractive.

6/AU,AB,AD,PN,PD,AN/6 (Item 6 from file: 349)

Inventor(s):
MATTHIES Dennis L ,
SHEN Zilan,
STEWART Roger G,
ATHERTON James H

Patent and Priority Information (Country, Number, Date):
Patent: WO 9941788 A1 19990819
Application: WO 99US3375 19990217 (PCT/WO US9903375)

English Abstract

A display device having features which enhance the contrast of displayed images includes a pixel structure that defines an active pixel area and an inactive pixel area. The display device may be an emissive device such as an OLED or electroluminescent device, a transmissive device such as a liquid crystal light-valve device or a reflective device, such as a Bistable, Reflective Cholesteric (BRC) liquid crystal device. The ratio of the active pixel area to the total pixel area is less than 50 percent. The display device includes a transparent cover plate having a black matrix formed on the viewer side of the cover plate. The display device may be a tiled display in which case the black matrix is formed on an integrator plate to which the individual tiles are bound to form the complete display device. For reflective or emissive display materials, the display device includes an electronics section including a circuit board which provides driving signals for the pixels of the display device. The electronics section is bound to the display section by an adhesive. To provide a light-absorptive background for the active pixel elements, the circuit board or the adhesive are colored black. The individual pixel elements of the display device include four sub-pixel components separated by portions of the inactive pixel area, which four

sub-pixel components together define the active area of the pixel. A lens system is provided on the viewer surface of the display to concentrate light emitted by the active area of the pixel elements into a smaller area, thus decreasing the aperture of the display. Areas between the lenses on the viewer surface of the display are coated with a black material to form a black matrix. A black material is selectively deposited on the front cover plate before applying the metal row electrodes to prevent the row electrodes from providing a reflective surface to the viewer.

French Abstract

Un affichage presente des caracteristiques ameliorant le contraste des images affichees, et comprend une structure de pixels qui definit une zone de pixels actifs et une zone de pixels inactifs. L'affichage peut etre un dispositif du type photoemetteur tel qu'un dispositif electroluminescent organique (OLED) ou un autre dispositif electroluminescent, un dispositif phototransmetteur tel qu'une photovalve a cristal liquide bistable de type BRC (Bistable Reflective Cholesteric). Le rapport de la superficie de pixels actifs est inferieur a 50 % de la superficie totale de pixels. L'affichage comprend un cache transparent et porte sur son cote apparent une matrice noire. Cet affichage peut etre un affichage par paves, dans ce cas, la matrice noire est formee sur une plaque d'integration a laquelle sont relies les paves individuels de maniere a former un affichage complet. Dans les materiaux d'affichages emissifs ou reflecteurs, l'affichage comprend une partie electronique comportant une plaquette de circuit qui produit des signaux pilotes pour les pixels de l'affichage. Cette partie electronique est reliee a la partie d'affichage par un adhesif. Pour fournir aux pixels actifs un fond absorbeur de lumiere, on teint en noir la plaquette de circuit ou l'adhesif. Chaque pixel comprend quatre composants sous-pixels separes par des parties de la surface de pixels inactifs, ces sous-pixels formant ensemble la surface active des pixels. Un systeme de lentilles monte sur la surface visible de l'affichage sert a concentrer la lumiere emise par la surface active des pixels pour aboutir a une superficie plus petite, reduisant ainsi l'ouverture de l'affichage. Des surfaces situees entre les lentilles sur la surface visible de l'affichage sont recouvertes d'une matiere noire pour former une matrice noire. On depose selectivement une matiere noire sur le cache frontal avant d'appliquer la rangee d'electrodes metalliques, de maniere a empecher que la rangee d'electrodes ne forme une face de reflexion tournee vers l'observateur.

6/AU,AB,AD,PN,PD,AN/9 (Item 9 from file: 349)

Inventor(s):
RIDDLE George Herbert Needham,
PRABHU Ashok Narayan,
MATTHIES Dennis Lee ,
SREERAM Attiganal Narayanaswamy

Patent and Priority Information (Country, Number, Date):
Patent: WO 9728554 A1 19970807
Application: WO 97US542 19970130 (PCT/WO US9700542)

English Abstract

A plasma display device includes a front panel (54) having a glass body (38) secured to a surface of a substrate (32). The glass body has a plurality of channels (40) in its exposed surface with upstanding ribs (44) being between the channels. Conductive first electrodes (48) are on the body with each electrode extending along the bottom of a separate channel. The first electrodes are preferably embedded in the glass body.

A transparent front panel is located over a back panel (31) and is seated on and secured to the glass body. A plurality of spaced, parallel second electrodes extend between the front panel and the back panel substantially orthogonally to the first electrodes. Phosphors which emit different colors are coated on the channels and the channels are filled with a plasma gas.

French Abstract

Un ecran a plasma comporte un panneau frontal (54) pourvu d'un corps en verre (38) fixe a la surface d'un substrat (32). La face exposee de ce corps en verre est pourvue de plusieurs canaux (40) que separent des nervures dressees (44). Le corps comporte une premiere serie d'electrodes conductrices (48), chacune s'etendant sur le fond d'un canal distinct. Ces premieres electrodes sont, de preference, encastrees dans le corps en verre. Un panneau frontal transparent, qui se situe au-dessus d'un panneau de fond (31), s'appuie contre le corps en verre et lui est fixe. Plusieurs secondes electrodes, separees et paralleles les unes aux autres, s'etendent entre le panneau frontal et le panneau de fond selon un plan sensiblement perpendiculaire a celui des premieres electrodes. Les canaux, qui sont revetus de luminophores emettant des couleurs differentes, sont remplis d'un gaz plasma.

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